23386

IN THE U.S. PATENT AND TRADEMARK OFFICE

Inventor	Reiner HANNEN et al	
Patent App.	10/552,431	
Filed	5 October 2005	Conf. No. 8948
For	ALIGNING A STACK ON A PALLET OR THE LIKE	
Art Unit	3652	Examiner Adams, G

Hon. Commissioner of Patents
Box 1450
Alexandria, VA 22313-1450

Appealed 08-Sep-08

SECOND APPEAL BRIEF UNDER 37 CFR 41.37

Now come appellants by their duly authorized attorney and submit their second brief under the provisions of 37 CFR 41.37.

I. REAL PARTY IN INTEREST

The real party in interest here is MSK-Verpackungs-Systeme Gesellschaft mit beschränkter Haftung as evidenced by an Assignment recorded 05 October 2005 at Reel 017857, frame 0533.

II. RELATED APPEALS AND INTERFERENCES

There are no related appeals or interferences.

III. STATUS OF CLAIMS

There are thirteen claims in the case numbered 14 - 26 of which claims 14, 19, 21, and 26 are independent. Claims 1-13 have been canceled. Claims 14-26 are being appealed.

A copy of the claims is attached as the Claim Appendix.

IV. STATUS OF AMENDMENTS AFTER FINAL ACTION

No amendments were filed after the final action mailed 06 June 2008.

V. SUMMARY OF CLAIMED SUBJECT MATTER

The instant invention is a method of and apparatus for aligning a stack of flexible sheets on a substrate or support having an outer edge. The goal of the invention is, starting with a stack of flexible sheets, e.g. of paper, where the sheets are not vertically aligned but at least some of them project laterally from the stack, to form a stack in which the sheets are all neatly vertically aligned. In the prior art the various systems for tamping together such misaligned stacks invariably bend over or more likely under the projecting sheets, producing a stack that could not be used in automatic sheet feeders.

This can be done in two main ways:

As described in independent apparatus claim 14 and as shown in FIGS. 1-4 and described in the Substitute Specification, a stabilizing element 8 (Spec. p. 9, line 25) with a nonslip surface 7

(Spec. p. 10, l. 1) is pressed horizontally against the laterally projecting sheets and they are pushed back into the stack "without bending or deflecting the sheets." The nonslip surface is resilient (claim 15) and elastomeric (claim 16) and prevents the projecting portions of the sheets from bending. The stabilizing element that pushes the sheet together may also have as described in claims 17 and 18 and shown in FIG. 4 an upper part 13 and a lower part 14 that meet at a nonplanar interface 15, 16. What is more, as described in dependent claims 23 24, and 25, sliding the sheets together can be assisted by reducing friction with the substrate, either with a low-friction foil or a coating of a lubricant.

Similarly, as described in independent method claim 21 and as shown in FIGS. 1-4 and described in the Substitute Specification, a stabilizing element 8 (Spec. p. 9, line 25) with a nonslip surface 7 (Spec. p. 10, l. 1) is pressed horizontally against the laterally projecting sheets and they are pushed back into the stack "without bending or deflecting the sheets." The nonslip surface is resilient (claim 15) and elastomeric (claim 16) and prevents the projecting portions of the sheets from bending. The stabilizing element that pushes the sheet together may also have as described in claims 17 and 18 and shown in FIG. 4 an upper part 13 and a lower part 14 that meet at a nonplanar interface 15, 16. What is more, as described in dependent claims 23 24, and 25, sliding the sheets together can be assisted by reducing friction with the substrate, either with a low-friction foil or a coating of a lubricant.

In the other main system as described in independent apparatus claim 19, the misaligned projecting sheets are supported from below at 12 (FIG. 3; spec. p. 10, l. 10) while being pushed in, so that they do not fold down and get bent under when pushed in. Dependent claim 20 describes how this is done with a horizontal surface generally level with an upper surface of the substrate as clearly shown in FIG. 3.

Similarly, as described in independent method claim 26, the misaligned projecting sheets are supported from below at 12 (FIG. 3; spec. p. 10, l. 10) while being pushed in, so that they do not fold down and get bent under when pushed in. Dependent claim 20 describes how this is done with a horizontal surface generally level with an upper surface of the substrate as clearly shown in FIG. 3.

VI. GROUNDS OF REJECTION TO BE REVIEWED ON APPEAL

The claims are all rejected under §103 on the combination of US patent 6,290,452 of Wächter, US 6,386,824 of Pizzi, and US 6,231,299 of Newsome. Thus there is only a single rejection.

VII. ARGUMENTS

Wächter discloses a system for picking up stacks of sheets at one location and setting them down at another. Thus as shown in FIG. 1 stacks are picked up at a station 4 on the left and set down on the right atop an "expiring" stack. The stacks are manipulated by a system of four pairs of arms 21 that have feet 26 that can engage as shown in FIG. 4 underneath the entire stack being moved. The pairs of arms 21 can be displaced toward each other by an actuator 22.

The Wächter system therefore represents the admitted prior art. There is no discussion of aligning sheets in the stacks or of somehow manipulating the stack to align the sheets therein. There is nothing to engage under misaligned sheets and no friction layer to engage them and ensure they can be pushed in to square the stack. Instead this system will undoubtedly bend and fold over any projecting sheets, producing a stack certain to misfeed. This reference therefore epitomizes the problems with the prior art and does not suggest a solution to the problem of misaligned sheet. It does not even recognize the problem of misaligned sheets.

Pizzi shows in FIGS. 4 and 5 a system for pushing together objects 3 from the side to vertically align them. Here, however, these objects are reams of paper. Thus here the workpiece is something that is stiff and that will not bend or fold over when tamped into alignment with other such workpieces. No measures, e.g. a sticky layer or something holding up misaligned objects, are shown or

suggested because such elements are totally unnecessary. There is no teaching in Pizzi as to how to deal with misaligned sheets. Thus this reference, like Wächter, does not deal with misaligned sheets or with anything resembling such a misaligned sheet. The teachings here would, furthermore, not apply to misaligned sheets, so that this reference is also irrelevant to the instant invention.

Newsome does in fact deal with the problem addressed by the instant invention, namely the alignment of flexible sheets in a stack of such sheets. Newsome does this by engaging foam-covered rollers 22 against sides of the stacks as same move along on a conveyor, much like the brushes in a car wash. The rollers 22 are rotatable about horizontally fixed vertical axes and as shown in FIG. 4 are in fact set to be compressed against the sides of the stack S so that they will inherently bend and fold over anything projecting from the side. There is nothing here to suggest engaging under projecting sheets while pressing them in, so this reference is totally irrelevant to claims 19 and 26 and any claims dependent thereon. Furthermore the fact that the rollers 22 compress against the sides of the stack and engage anything projecting incrementally in a manner guaranteed to fold it over would seem to mean that there is no problem with sheets being bent over, probably because the sheets here are so stiff that they can be thus tamped together into stacks without folding. The contact region between the rollers and anything that projects is so small that, unless the projecting part were very stiff, it would undoubtedly be folded over. Alternately is it possible that the

problem of folding over sheets is simply not recognized by Newsome, a possibility borne out by the fact that this problem is not discussed in this reference.

Wächter and Pizzi do not recognize or address the problem of aligning sheets in a stack. Newsome does so with a rotary fixed-axis roller bearing no resemblance to the systems of this invention as defined in the claims. The systems of Newsome and Wächter are not combinable because the rotary rollers of Newsome could not be used to pick up the stack of Wächter. Although Wächter deals with flexible sheets, there is no discussion whatsoever to realign them if any are out of alignment, so there is no motivation or suggestion to align them. In Pizzi the workpiece is rigid so that the problem of folding over during alignment is simply not there. In Newsome it is apparently presumed that flexible sheets can be pushed back into alignment without taking any measures to prevent them from folding over.

This rejection is therefore a piecemeal assembly of references that deal with different problems and different workpieces in different manners. Only a hindsight rejection could possibly combine them. The rejection on §103 is incorrect because it takes teachings that are not related to each other and, based on the instant application, assembles them in a way nowhere suggested by the references to produce a system dealing with a problem not even recognized by most of the references.

CONCLUSION

The §103 rejection is based on an unobvious combination of disparate teachings mostly dealing with other problems and must be withdrawn.

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Enclosure: Appeal fee already paid by EFS

VIII. CLAIM APPENDIX

1 -- 13. (canceled)

14. (previously presented) An apparatus for aligning a stack of flexible sheets on a substrate having an outer edge, some of the sheets projecting laterally past one of the edges, the apparatus comprising:

a stabilizing element shiftable horizontally toward and away from the one edge of the substrate and having a face directed toward the sheets;

a slip-preventing layer on the face; and

means for shifting the element horizontally toward the stack and substrate for engaging the projecting sheets and pushing same inward on the substrate to a position lying on or inward of the outer edge without vertically bending or deflecting the sheets.

15. (previously presented) The apparatus defined in claim 14 wherein the layer is resilient.

16. (previously presented) The apparatus defined in claim 15 wherein the layer is made of an elastomer.

17. (previously presented) The apparatus defined in claim 15 wherein the element has an upper part and a lower part.

18. (previously presented) The apparatus defined in claim 17 wherein the upper and lower part are joined together at a nonplanar interface.

19. (previously presented) An apparatus for aligning a stack of flexible sheets on a substrate having an outer edge, some of the sheets projecting laterally past one of the edges, the apparatus comprising:

a stabilizing element shiftable horizontally toward and away from the one edge of the substrate;

a member on the element engageable under the stack; and

means for shifting the element horizontally toward the stack and fitting the member under the projecting sheets to support same while and pushing the projecting sheets inward on the substrate to a position lying on or inward of the outer edge without vertically bending or deflecting the sheets.

20. (previously presented) The apparatus defined in claim 19 wherein the element has a horizontal surface portion generally level with an upper surface of the substrate.

21. (previously presented) A method of aligning a stack of flexible sheets on a substrate having an outer edge, some of the sheets projecting laterally past one of the edges, the method comprising the step of:

pressing a nonslip surface of a stabilizing element against the laterally projecting sheets so as to push the laterally projecting sheets in at least to the outer edge without bending while pushing them in; and thereafter

pressing the stabilizing element against the other sheets in the stack to align them on the substrate.

22. (previously presented) The method defined in claim 21, further comprising the step before pressing the stabilizing element against the laterally projecting sheets of:

aligning the substrate relative to the stabilizing element.

23. (previously presented) The method defined in claim 21, further comprising the step of

reducing friction between a lowermost sheet of the stack and a support surface of the substrate on which it rests.

24. (previously presented) The method defined in claim 23 wherein friction is reduced by providing a low-friction foil between the lowermost sheet and the upper surface.

25. (previously presented) The method defined in claim 23 wherein friction is reduced by coating the upper surface with a lubricant.

26. (previously presented) A method of aligning a stack of flexible sheets on a substrate having an outer edge, some of the sheets projecting laterally past one of the edges, the method comprising the step of:

engaging a support surface of a stabilizing element underneath the laterally projecting sheets and pushing the stabilizing and the laterally projecting sheets in at least to the outer edge without bending the laterally projecting sheets; and thereafter

pressing the stabilizing element against the other sheets in the stack to align them on the substrate.

IX. EVIDENCE APPENDIX

None.

X. RELATED PROCEEDINGS APPENDIX

None.